

REMARKS

In the Office Action dated March 17, 2008, claims 70-91 are pending. Claims 90-91 are withdrawn from further consideration as drawn to a nonelected invention. Claims 70-89 are examined on merits in the Action. Claims 77-81 and 88-89 are objected to because of certain alleged informalities. Claims 80-87 and 89 are rejected under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter. Claims 76, 79, and 81-89 are rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Claims 70-89 are rejected under 35 U.S.C. §112, first paragraph, for allegedly lacking enabling support in the specification. Claims 70-89 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 70-79 are rejected under 35 U.S.C. §102(b) as anticipated by Gauthier et al. (GenBank Sequence Accession No. U16794, pages 1-2, published November 8, 1995), as evidenced by Joshi et al. (*Plant Molecular Biology* 37: 663-674, 1998). Claims 70-89 are rejected under 35 U.S.C. §103(a) as unpatentable over Jorgensen et al. (U.S. Patent No. 5,034,323, Issued July 12, 1991), in view of Joshi et al. (*Plant Molecular Biology* 37: 663-674, 1998) and Jonsson et al. (*Planta* 160: 174-179, 1984). The application is objected to for allegedly failing to comply with the requirements of 37 C.F.R. §§1.821-1.825. The disclosure is also objected to for containing hyperlinks. Further, the oath is objected to as defective.

This Response addresses each of the Examiner's rejections and objections. Applicants therefore respectfully submit that the present application is in condition for allowance. Favorable consideration of all pending claims is therefore respectfully requested.

Oath/Declaration

The oath is allegedly defective because the address of inventor "Ronald Koes" has been altered without initials. The Examiner has required submission of a new oath in

compliance with 37 C.F.R. §1.167(a) identifying this application by application number and filing date.

A new oath in compliance with 37 C.F.R. §1.167(a) will be submitted as soon as an executed copy is received by the undersigned attorney.

Objections to Specification

The specification is objected to for containing hyperlinks. Applicants have amended the specification to delete hyperlinks.

The application is also objected to for allegedly failing to comply with the sequence rules set forth in 37 C.F.R. §§1.821-1.825. Applicants have amended the specification to insert sequence identifiers for SEQ ID NOS: 48-51, and have attached herewith a substitute Sequence Listing which includes SEQ ID NOS: 48-51. Applicants are also submitting a Statement under 37 C.F.R. §§1.821, verifying that the substitute Sequence Listing does not introduce new matter.

Accordingly, the objections to the specification are overcome. Withdrawal of the objections is respectfully requested.

New Claims

Previous pending claims 70-91 are canceled by the instant amendment. New claims 92-115 are presented and correspond to the elected invention relating to SEQ ID NOS: 11 and 12. Further, claims 92-115 are fully supported by the originally filed claims and previously presented claims 70-91, as well as by the specification. Compared to the previous claims, the currently presented claims recite higher sequence identities or require medium stringency conditions for hybridization, as supported by the specification, e.g., page 27, lines 12-14, and page 28, lines 1-17. No new matter is introduced by claims 92-115.

In view of the cancellation of claims 70-91, all the objections and rejections directed

to these claims are overcome. Nevertheless Applicants submit the following remarks in respect to the rejections raised under 35 U.S.C. §112, first paragraph, 35 U.S.C. §102(b) and 35 U.S.C. §103.

35 U.S.C. §112, First Paragraph

The Examiner states that the specification is enabling for a nucleotide sequence encoding a flavonoid methyltransferase (FMT) as defined in SEQ ID NO: 12, a genetic construct or a genetically modified plant comprising such nucleotide sequence. However, the Examiner contends that the specification does not provide enablement for (a) a functional derivative of a flavonoid methyltransferase, (b) a nucleotide sequence having about 50% identity to SEQ ID NO: 11, (c) a nucleotide sequence encoding an amino acid having about 50% similarity to SEQ ID NO: 12, or (d) a nucleotide sequence capable of hybridizing under low stringency conditions to a nucleotide sequence encoding SEQ ID NO: 12.

Applicants respectfully submit that the currently presented claims 92-115 do not include recitations of "functional derivative". Further, the current claims require the nucleotide sequence to have at least about 70% or even 95% identity to SEQ ID NO: 11; or to encode an amino acid having about 80% similarity, or even 95% identity, to SEQ ID NO: 12; or to hybridize under *medium* stringency conditions to the specified nucleotide sequence. Applicants respectfully submit that based on the teaching provided in the specification, those skilled in the art would be able to make and use the nucleic acids, as presently recited, without undue experimentation. In support of Applicants' position, it is noted that the specification has demonstrated the isolation of an FMT-encoding cDNA from *Torenia* using a homologous *Petunia* FMT cDNA clone (see page 72, Example 9 of the specification), as well as the isolation of an FMT-encoding cDNA from *Fuchsia* using primers designed based on *Petunia* FMT

sequences (see page 100, Example 12 of the specification). Therefore, it is respectfully submitted that the subject matter as presently claimed is fully enabled by the specification.

With respect to the previous claims and the written description requirement, the Examiner contends that there is no description of the structure required for the recited function of FMT, or description of the necessary elements of a functional FMT protein. Thus, the claimed genus encompasses structures whose function is unrelated to a functional FMT.

Applicants respectfully submit that the presently presented claims represent a well-defined genus of molecules which are described and characterized by sufficient *structural* and *functional* features in a manner consistent with the written description requirement. More specifically, the claimed molecule is functionally characterized as encoding or complementary to a sequence encoding a flavonoid methyltransferase (FMT) which methylates anthocyanins. Further, the claimed molecule is characterized structurally by its sequence, or its high percent sequence similarity to a specified sequence, or by the hybridization characteristics of its sequence. Accordingly, it is respectfully submitted that the presently claimed subject matter is adequately described and satisfies the written description requirement.

§102(b) Rejection based on Gauthier et al.

Gauthier et al. disclose a cDNA clone encoding a 3' flavonoid O-methyltransferase protein. According to the Examiner, this cDNA clone would be able to hybridize to instant SEQ ID NO: 11 and to a nucleotide sequence encoding SEQ ID NO: 12 under low stringency conditions.

Applicants respectfully submit that Gauthier et al. do not teach a nucleic acid that encodes a FMT, and that is characterized by the currently recited sequence and hybridization features. Therefore, the presently claimed subject matter is not taught by Gauthier et al.

§103 Rejection

The Examiner's §103 rejection is based on Jorgensen et al. in view of Joshi et al. and Jonsson et al. The rejection is predicated on the Examiner's determination that Joshi et al. teach a nucleotide sequence (U16794), which allegedly encodes a 3' flavonoid O-methyltransferase and would be able to hybridize would be able to hybridize to instant SEQ ID NO: 11 and to a nucleotide sequence encoding SEQ ID NO: 12 under low stringency conditions.

Applicants respectfully submit that Joshi et al. do not teach a nucleic acid that encodes a FMT, and that is characterized by the currently recited sequence and hybridization features. Therefore, the Examiner's premise for raising the obviousness rejection is no longer valid.

Conclusion

In view of the foregoing amendments and remarks, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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Encls: Substitute Sequence Listing; Statement Under 37 C.F.R. §1.821(g);
Information Disclosure Statement, Form PTO1449, IDS Transmittal and
Copies of nine references.